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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/724,406	11/28/00	FRANCISCO J	9632-006-999

020583
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HM22/0718

EXAMINER	
DAVIS,N	
ART UNIT	**PAPER NUMBER**
1642	9

DATE MAILED: 07/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/724,406	Applicant(s) FRANCISCO ET AL.	
	Examiner Natalie A. Davis	Art Unit 1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8, 11, 13-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 11, 13-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 4 June, 2001 has been considered. A signed copy is attached hereto.

Claim Rejections - 35 USC § 112

2. Claims 1-8, 11, and 13-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the treatment of Hodgkin's disease, does not reasonably provide enablement for the prevention of Hodgkin's disease. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The first paragraph of 35 U.S.C. 112 states, "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same..." The courts have interpreted this to mean that the specification must enable one skilled in the art to make and use the invention without undue experimentation. The courts have further interpreted undue experimentation as requiring "ingenuity beyond that to be expected of one of ordinary skill in the art" (Fields v. Conover, 170 USPQ 276 (CCPA 1971)) or requiring an extended period of experimentation in the absence of sufficient direction or guidance (In re Colianni, 195 USPQ 150 (CCPA 1977)). Additionally, the courts have determined that "... where a statement is, on its face, contrary to generally accepted scientific principles," a rejection for failure to teach how to make and/or use is proper (In re Marzocchi, 169 USPQ 367 (CCPA 1971). Factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in In re Colianni, 195 USPQ 150, 153 (CCPA 1977) and have been clarified by the Board of Patent Appeals and Interferences in Ex parte Forman, 230 USPQ 546 (BPAI 1986). Among the factors are the nature of the invention, the state of the prior art, the predictability or lack thereof in the art, the amount of direction or guidance present, the presence or absence of working examples, the breadth of the claims, and the quantity of experimentation needed.

The instant disclosure fails to meet the enablement requirement for the following reasons:

The nature of the invention: The claimed invention is drawn to a method of preventing Hodgkin's disease in a subject comprising administering an antibody and a pharmaceutically acceptable carrier that immunospecifically binds CD30 and exerts a cytotoxic effect on a Hodgkin's Disease cell line, wherein the antibody is human, humanized, or chimeric and is conjugated to a cytotoxic agent.

The state of the prior art and the predictability or lack thereof in the art: The art teaches that Hodgkin's disease may be treated via chemotherapy and by targeting the CD30 antigen with anitbodies that specifically bind to it. However, there is no evidence in the art teaching the prevention of Hodgkin's disease in a subject by administration of an antibody or protein or by any method. Furthermore, those of skill in the art recognize that, although a method may be useful in the treatment of a disease, clinical correlation with prevention of a disease does not necessarily follow. For example, there are methods of treatment for HIV, but there is no method available that protects against infection with HIV. Thus, it would require undue experimentation to one skilled in the art to practice the claimed invention as the art only teaches the treatment of Hodgkin's disease.

The amount of direction or guidance present and the presence or absence of working examples: The specification discloses the therapeutic formulations for the administration of antibodies and proteins (p. 44), the effective doses (p. 46), and methods of administration (p. 47) for the treatment of Hodgkin's disease, but does not provide any guidance for the prevention of Hodgkin's disease. There are no working examples describing how to administer the claimed antibodies and proteins *in vivo* in order to prevent the development of Hodgkin's disease. While the specification discloses how the claimed invention inhibits the growth of Hodgkin's cell lines (p. 50), enhances the cytotoic effect of chemotherapeutics on Hodgkin's cell lines, (p. 52) delays the growth of tumors in mice bearing Hodgkin's disease xenografts (p. 53-54), it does not provide any definitive evidence that shows the prevention of Hodgkin's disease in a human or any subject.

The breadth of the claims and the quantity of experimentation needed: Since there is no art teaching the prevention of Hodgkin's disease, and it is known that a method of treatment for a disease in not necessarily effective in the prevention of a disease, it would be unpredictable to

prevent Hodgkin's disease using the claimed method. Therefore, in view of the lack of working examples one of skill in the art would not be able to practice the claimed invention because undue experimentation would be required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7, 8, 13, 15, 16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Thorpe et al., ('23, 1992). The elected claims are drawn to a method of treating or preventing Hodgkin's Disease in a subject comprising administering an antibody and a pharmaceutically acceptable carrier that immunospecifically binds CD30 and exerts a cytotoxic effect on a Hodgkin's Disease cell line, wherein the antibody is human, humanized, or chimeric and is conjugated to a cytotoxic agent.

Thorpe et al. teach a method for treating Hodgkin's disease by administering immunotoxins such as CD30 or IRac antibody conjugated with a peptide to a toxin A chain moiety in a pharmaceutically acceptable carrier. Thorpe et al. also teach antibodies derived from Hodgkin's disease cells or Reed-Sternberg cells that specifically bind CD30, which would compete with monoclonal antibodies AC10 or HeFi-1, and are cytotoxic to the L540 Hodgkin's cell line. Since Thorpe et al. teach the method of claim 1 the method of determining the cytoxic effect would be inherent. Thus, the prior art reference teaches the method of treating Hodgkin's disease as claimed.

Claim Rejections - 35 USC § 103

5. Claims 1-8 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorpe, et al., ('23, 1992) in view of Engert et al., (1999). The elected claims are drawn to a method of treating or preventing Hodgkin's Disease in a subject comprising administering an

antibody and a pharmaceutically acceptable carrier that immunospecifically binds CD30 and exerts a cytotoxic effect on a Hodgkin's Disease cell line, wherein the antibody is human, humanized, or chimeric and is conjugated to a cytotoxic agent. In addition, the claims are further drawn to a method of treatment comprising administering chemotherapy.

Thorpe et al. teach a method for treating Hodgkin's disease by administering immunotoxins such as CD30 or IRac antibody conjugated with a peptide to a toxin A chain moiety in a pharmaceutically acceptable carrier. Thorpe et al. also teach antibodies derived from Hodgkin's disease cells or Reed-Sternberg cells that specifically bind CD30, which would compete with monoclonal antibodies AC10 or HeFi-1, and are cytotoxic to the L540 Hodgkin's cell line. Thorpe et al. does not teach a method for treatment of Hodgkin's disease further comprising administering chemotherapy. However, Engert et al. teach the treatment of Hodgkin's disease using chemotherapy and immunotoxins constructed with anti-CD30 monoclonal antibodies. In re Kerkhoven, 205 USPQ 1069 (CCPA 1980) states that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose in order to for a third composition that is to be used for the very same purpose since the idea of combining them flows logically from their having been individually taught in the prior art. From the instant claims, it would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Thorpe and Engert to use a method of treatment for Hodgkin's disease comprising administering an antibody that specifically binds CD30 and further comprising administering chemotherapy. One of ordinary skill in the art would have been motivated to use this method because of the reasonable expectation of success based on well known and accepted methods in the art of how to treat Hodgkin's disease using chemotherapy or immunotoxins.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie A. Davis whose telephone number is 703-308-6410. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa can be reached on 703-308-3995. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4315 for regular communications and 703-308-4556 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Natalie A. Davis, Ph.D.
July 13, 2001

ANTHONY C. CAPUTA
SUPERVISORY PATENT EXAMINER
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